Math 4320 — Introduction to Algebra. Homework 11

Extra questions.

1. Express $x^8 - 1$ and $x^{10} - 1$ as products of cyclotomic polynomials $\Phi_i(x)$. Express each $\Phi_i(x)$ you encounter as a polynomial in x.

2. Find all the elements which generate the multiplicative group $\mathbb{F}_{11} \smallsetminus \{0\}$ of the finite field $\mathbb{F}_{11}$.

TRR